

WHAT IS CLAIMED IS:

1. A stacked semiconductor device, comprising:
  - a first substrate that has external connecting terminals;
  - first terminals that are placed on a surface of the first substrate opposite to a surface of the first substrate on which the external connecting terminals of the first substrate are formed;
  - at least one first semiconductor chip that is mounted on the first substrate;
  - a second substrate that is placed on the first semiconductor chip;
  - at least one second semiconductor chip that is mounted on the second substrate; and
  - second terminals that are formed on the second substrate and electrically connected to at least one of the first semiconductor chip and the second semiconductor chip, the second terminals being connected to the first terminals by wire bonding.
2. The stacked semiconductor device as claimed in claim 1, wherein:
  - the second semiconductor chip is attached to the first terminals of the first substrate by wire bonding;
  - the first semiconductor chip is mounted on the second substrate by flip-chip bonding; and
  - the second terminals of the second substrate are connected to the first terminals of the first substrate by wire bonding.
3. The stacked semiconductor device as claimed in claim 2, wherein:
  - the second substrate has an extending portion that extends beyond an outer periphery of the second

semiconductor chip;

the second terminals of the second substrate are bonding pads formed at the extending portion; and

the second terminals are connected to the first terminals by wire bonding.

4. The stacked semiconductor device as claimed in claim 3, wherein:

the extending portion of the second substrate has notches; and

bonding wires that connect the second semiconductor chip to the first terminals of the first substrate extend through the notches.

5. The stacked semiconductor device as claimed in claim 1, wherein:

the first semiconductor chip is connected to the first terminals of the first substrate by wire bonding;

the second semiconductor chip is connected to the second terminals of the second substrate by wire bonding; and

the second terminals of the second substrate are connected to the first terminals of the first substrate by wire bonding.

6. The stacked semiconductor device as claimed in claim 5, wherein:

the second substrate has an extending portion that extends beyond an outer periphery of the second semiconductor chip; and

the second terminals of the second substrate are connected to the first terminals of the first substrate by wire bonding via first bonding pads formed at the extending portion.

7. The stacked semiconductor device as claimed in claim 6, wherein:

the second semiconductor chip is connected by wire bonding to second bonding pads formed on the second substrate; and

the second bonding pads are connected to the first bonding pads via a wiring pattern formed on the second substrate.

8. The stacked semiconductor device as claimed in claim 1, wherein the second substrate has an extending portion extending toward a periphery of the second substrate, and the extending portion has an end surface that is exposed in a side surface of the packaged semiconductor device.

9. The stacked semiconductor device as claimed in claim 8, wherein the end surface of the extending portion is a cut surface formed by cutting so as to individualize the stacked semiconductor device.

10. The stacked semiconductor device as claimed in claim 1, wherein a conductive layer is provided on a substantially entire surface of the second substrate opposite to a surface provided with the second terminals.